**Fitness in Adults: Weight Loss & Physical Activity** by Marcie Richmond

**What’s the problem?**

* 34.9% or 78.6 million of U.S. adults are obese.
* Hypertension, dyslipidemia, glucose intolerance, sleep apnea, heart disease, stroke, type 2 diabetes and certain types of cancer = obesity related = some of the leading causes of preventable death
* Weight loss decreases rates of above as well as mortality, urinary incontinence and depression, and results in improvements in quality of life, physical functioning, and mobility and LESS MEDICATION
* Estimated annual medical cost of obesity in the U.S. was $147 billion in 2008 U.S. dollars; the medical costs for people who are obese were $1,429 higher than those of normal weight.
* Non-Hispanic blacks have the highest age-adjusted rates of obesity (47.8%) followed by Hispanics (42.5%), non-Hispanic whites (32.6%), and non-Hispanic Asians (10.8%)
* Low income, low education women disproportionately affected
* Too much information, too little time

**Diagnosis**

* BMI = body weight (in kg) ÷ height (in meters) squared
* Normal - 18.5 to 24.9 kg/m2 (Lowest risk = 20-25)
* Overweight – ≥25.0 to 29.9 kg/m2.
* Obesity – ≥30 kg/m2, I – 30.0 to 34.9, II – 35.0 to 39.9 kg/m2, III – BMI ≥40 kg/m2
* Waist circumference of ≥40 in (102 cm) for men and ≥35 in (88 cm) for women is indicative of increased cardiometabolic risk. Unnecessary in patients with BMI ≥35 kg/m2
* Target patients with BMI 25-30 and 1 or more CVD risk factors + BMI>30

**Treatment**

**1. Lifestyle intervention:** Diet, exercise, and behavioral modification

* CREATE AN ENERGY DEFICIT through caloric restriction, increased exercise, or both.
* Decreasing energy intake has a greater potential for weight loss than increasing expenditure
* Set goals (SMART): Prevent further weight gain. Initial weight loss goal of 5-10% within 3-6 months. 0.5 to 1 kg/week. Reduce intake by 500 kcal/day. Most patients have a weight loss goal of 30% (unrealistic). Weight loss >5% reduces risk of CVD = success!!
* Can calculate resting energy expenditure
* Adherence to the program is the most important factor
* Behavior:
  + Self monitoring: food & activity logs, self weighing
  + Stimulus control: make healthy food available, focus on eating, ask Am I Hungry?
  + Smaller plates and bowls
  + Avoid hunger
  + Slow down eating
  + Rewards
  + Nutrition education
  + Meal planning
  + Decrease screen time
  + Weight Watchers, Jenny Craig, etc. More is better.
  + Fitness Rx
  + Address sleep & depression
* Diet:
  + Patient adherence is more important than specific diet type
  + Low hanging fruit: sugary beverages, fast food, breakfast, increase fruits & vegetables
* Exercise: Modest effects on its own.
  + 150 minutes per week to maintain weight in young, normal weight population
  + In order to maintain normal body weight in the mid-life, higher levels of physical activity (approximately 60 minutes/day) were necessary. Once overweight, physical activity in the absence of controlling caloric intake did not prevent weight gain.
  + A 120-pound person walking 3 MPH expends < 2 calories per minute more than standing still. At 200 pounds it is 3 calories per minute = 30-minute walk dissipates an extra 90 calories at 200 lbs as compared with 60 calories for a person weighing 120 pounds.
  + Decreases body fat
  + Walking
  + Resistance & balance exercises
  + Increase daily activity (stairs, getting off bus early)

**2. Pharmacologic Therapy** – BMI>30 (or >27 with comorbidities), who have failed to achieve weight loss goals through diet and exercise alone. 10-15% loss = good response.

* Orlistat
* Lorcaserin – serotonin agonist
* Sympathomimetics – phentermine, diethylpropion, benzphetamine, phendimetrazine – 12w, not recommended by UpToDate because of their potential side effects, potential for abuse, and limited duration of use. CI in patients with coronary heart disease, hypertension, hyperthyroidism, drug abuse.
* Buproprion
* Topiramate
* Metformin, pramlintide (islet amyloid polypeptide), exenatide (GLP-1 receptor agonist)
* Phentermine-topiramate
* Buproprion-naltrexone
* Not recommended: HCG, supplements, OTC junk

**3. Bariatric Surgery –**

* BMI ≥40 or >35 kg/m2 with obesity-related comorbidities who have failed to lose weight with diet, exercise, and drug therapy.
* Leads to greater weight loss (mean difference -26 kg) and higher remission rates of type 2 diabetes.
* Most common adverse effects = iron deficiency anemia and the need for reoperations.
* Goal of presurgical testing is to determine if patient is able and willing to make the necessary lifestyle changes required for sustainable weight loss & to identify psych disorders that will present challenges to change and put patient at high risk for complications
* Liposuction does not reduce CVD/glucose intolerance.
* Vagal blockade – insufficient efficacy and safety data, modest effect on weight loss compared with traditional bariatric surgeries

4. **Maintenance** – National Weight Control Registry, >**10,000 individuals who have lost significant amounts of weight and kept it off for long periods of time**

* 45% of lost the weight on their own, the rest with the help of some type of program.
* 98% of Registry participants report that they modified their food intake in some way to lose weight.
* 94% increased their physical activity – most frequently walking
* Continue to maintain low calorie, low fat, high activity
  + 78% eat breakfast every day.
  + 75% weigh themselves at least once a week.
  + 62% watch less than 10 hours of TV per week.
  + 90% exercise, on average, about 1 hour per day.

Resources:

* Apps: “fitness,” “food tracker,” “weight,” “exercise”
* ChooseMyPlate.gov – grocery lists, recipes
* Amihungry.com
* <http://www.cdc.gov/healthyweight/index.html>
* AIM HI
* [http://familydoctor.org/familydoctor/en/prevention-wellness/food-nutrition/weight-loss.html](http://familydoctor.org/familydoctor/en/prevention-wellness/food-nutrition/weight-loss.html" \t "_blank)
* National Weight Control Registry
* Heart.org

References:

UpToDate Articles

* Obesity in Adults: Overview of Management
* Obesity in Adults: Dietary Therapy
* Obesity in Adults: Role of physical activity and exercise
* Obesity in Adults: Behavioral therapy
* Obesity in Adults: Drug Therapy

AAFP/American Family Physician

* Office-Based Strategies for the Management of Obesity
* Four Strategies for Promoting Healthy Lifestyles in Your Practice
* Common Dietary Supplements for Weight Loss
* Weight Loss Maintenance

CDC: http://www.cdc.gov/obesity/adult/

Motivational Interviewing:

* Ask permission,
* Elicit/Evoking Change Talk,
* Exploring Importance/Confidence,
* Advice/Feedback,
* Normalizing,
* Decisional Balancing,
* Open Ended Questions,
* Affirmations,
* Reflective Listening,
* Summaries,
* Express Empathy,
* Support Self-Efficacy,
* Roll with Resistance,
* Develop Discrepancy

Tips from North American Association for the Study of Obesity:

1. Be sensitive; patients have probably had negative experiences
2. Recognize complex etiology, avoid stereotypes
3. Explore all causes of presenting problems
4. Recognize patients have tried to lose weight repeatedly
5. Emphasize behavior change over number on the scale
6. Negotiate concrete changes
7. Acknowledge difficulty
8. Recognize that small weight losses can result in significant health gains